

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ta-Shuang Kuan, Chia-Tsung Chan, Chia-Te Lin

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Docket No.: NAUP0588USA Confirmation No.: 4505

10 Title: LIQUID CRYSTAL ON SILICON DISPLAY WITH MICRO COLOR  
FILTERS POSITIONED ON THE TOP SURFACE OF THE  
TRANSPARENT SUBSTRATE

To: Commissioner for Patents  
P.O. BOX 1450  
15 Alexandria, VA 22313-1450

Subject: **Submission of Prior Art under 37 CFR §1.501**

20 Dear Sir,

This is a submission of prior art under 37 CFR §1.501. The applicants wish to make of record each of the documents listed on the accompanying form PTO/SB/42.

25 The cited reference contained in this submission was first cited in the Office action mailed on March 30, 2007 against the counterpart China patent application No. 2004100709599, which are no more than three months prior to the filing of the citation of prior arts. The cited references contain China  
30 patents CN 1360220A, CN 2514447Y, and CN 1470909A. Copies of the three patents and an English-language equivalent US patent No. 6,909,479 of CN 1360220A are submitted and also listed

in the form PTO/SB/42.

According to the requirement set forth in 37 CFR 1.98(a)(3) and MPEP 609.04(a) III, English language abstract of cited  
5 references CN 2514447Y and CN 1470909A is included herewith to fulfill the concise explanation requirement.

**CN 2514447Y (filed June 26, 2001)**

The miniature reflecting colour display device includes  
10 a silicon substrate with CMOS structures, an array of metal reflective layers, a lower alignment film, a liquid crystal layer, an upper alignment film, a transparent conductive layer, and a glass substrate stacked from bottom to top to be packaged as a display device. The display device also includes micro  
15 color filters with three colors arranging as an array, positioned between the upper alignment film and the transparent conductive layer. The optical system of a color projector can be simplified according to the display device, which also provides advantages of low volume, low cost, and  
20 high reliability to the color projector.

**CN 1470909A (filed July 26, 2002)**

The main point of the invention is that a liquid crystal layer is setup between the upper and lower insulated base  
25 plates; a half-reflection film layer is coated on the lower insulated base plate. A color light filter layer constituted by photoresistive with high color saturation and a resin protective layer are formed on the half-reflection film in sequence. A total reflection film is coated on the protective  
30 layer. Finally, patternizing total reflection film is carried out.

Respectfully submitted,

Winston Hsu

Date: 2007/6/27

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